

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave.St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003665**Date Inspected:** 18-Aug-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Zhao Chen Sun and Hu Wei Qing			CWI Present:	Yes	No
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No N/A
				Delayed / Cancelled:	Yes	No N/A
Bridge No:	34-0006			Component:	OBG and SAS Tower Fabrication	

Summary of Items Observed:

On this date, Caltrans Office of Structural Material (OSM) Quality Assurance (QA) Inspector Joselito Lizardo was present as requested to perform observations on the fabrication of Orthotropic Box Girder (OBG) and SAS Tower at Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China.

The QA Inspector has randomly observed the following activities on sub-assembly Bays mentioned below;

Bay 4: Tower Diaphragm

Preheating to >180 degree C using ceramic thermal blanket tower diaphragm plate to diaphragm flange fillet weld connection WSD1-SA318A/B-2 prior welding was also observed. After attaining required preheat, this QA observed two ZPMC welders, ID #053609, and ID #054460 utilizing the FCAW Process in the 2F (Horizontal) Position with a 1.4mm diameter electrode, filler metal brand K-71TSR, semi automatic with ZPMC WPS WPS-B-T-4132 to weld fillet root pass on fillet weld connection just mentioned. The QA Inspector randomly observed ZPMC CWI Zhao Chen Sun monitoring weld parameters.

This QA observed four ZPMC welders ID #053753, ID #068918, ID #066416, and ID #048659 SMAW(4G) PJP welding fill pass on 60mm stiffener plate to (top) tower double diaphragm plate SSD1-SA333 B/B weld joints 1, 2, 13 and 14. ZPMC welders were noted utilizing Excalibur E9018M H4R, 4.8mm diameter electrode. The QA Inspector randomly observed ZPMC CWI Zhao Chen Sun monitoring weld parameters. SMAW(3G) tack welding 60mm thick stiffener plate to 40mm thick tower double diaphragm web plate tee joint NSD1-SA322 A/B weld joints 16 and 17 using the same electrode.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

This QA Inspector randomly observed ZPMC welder Han Kun ID #066751 utilizing the FCAW Process in the 3G (Vertical Groove) Position with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic with ZPMC WPS WPS-B-T-2233-B-U3-F, to weld fill passes on groove (bent heavy plate) splice butt joint on Tower Diaphragm Flange Sub-Assembly SSD1-SA219-4A. The QA Inspector randomly observed ZPMC CWI Zhao Chen Sun monitoring preheat and weld parameters.

Bay 7: OBG - Floor Beam Sub Assembly

This QA randomly observed ZPMC welder Hong Shuili ID Number 044815 and Liu Kaige ID #044830, utilizing the FCAW Process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H in the 1G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2231-Tc-U4b-F to weld CJP fill pass on flange to web plate of floor beam FB029-001 weld joints 125, 126 and 127 and FB031-001 weld joints 125, 126 and 127 respectively. The QA Inspector randomly observed ZPMC CWI Hu Wei Qing monitoring preheat and weld parameters.

This QA Inspector randomly observed ZPMC welder Zhang Qingquan ID #044774 and Niu Yuehai ID #066443 utilizing the FCAW Process in the 2G (Hor. Groove) Position with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic to weld fill passes on groove of web plate to flange tee joint on floor beam FB032-001-146 and stiffener end (200mm long) to web plate of floor beam FB030-001-012 respectively. The QA Inspector randomly observed ZPMC CWI Hu Wei Qing monitoring preheat and weld parameters.

FCAW(2F/3F) fillet welding on stiffener to web plate/flange of floor beam FB059-002-weld joints 067, 060, 052 and 068 utilizing 1.4mm diameter, filler metal brand E71T-1, class Supercored 71H by ZPMC welder Chen Chuanzong ID #044824 this QA also observed.

Bay 8: Tower Diaphragm

The QA Inspector randomly observed ZPMC Welders ID #066456, ID #067656, ID #068924 and ID #067993 utilizing the Shielded Metal Arc Welding (SMAW) Process in the 3G (Vertical Groove) Position with ZPMC WPS WPS-B-T-3313-Tc-P5 to weld tower double diaphragm PJP fill pass on 40mm thick web plate to 60mm thick stiffener plate tee joint SSD1-SA326 weld joints 11, 12, 13, 14 and 15. The QA Inspector randomly observed ZPMC CWI Lvliqing monitoring weld parameters. SMAW tack welding of 40mm web plate to 60mm thick stiffener plate tee joint ESD1-SA301 A/B-weld joints 13 and 14 for tower double diaphragm plate also noted.

This QA observed ZPMC welder ID #066422, ID #045133, ID #045148 and ID #045246 SMAW(2G) PJP welding fill pass on 60mm stiffener plate to (bottom) tower double diaphragm plate ESD1-SA371 B/B weld joints 15 and 16 and 40mm web plate to (bottom) tower double diaphragm ESD1-SA371 B/B weld joints 5 and 6. ZPMC welders were noted utilizing Excalibur E9018M H4R, 4.8mm diameter electrode. The QA Inspector randomly observed ZPMC CWI Lvliqing monitoring weld parameters.

This QA Inspector randomly observed ZPMC welder ID number 066675 and ID #045236 utilizing the FCAW Process in the 3G (Vertical Groove) Position with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic with ZPMC WPS WPS-B-T-2233-B-U3-F, to weld fill pass on groove (bent heavy plate) splice butt joint on Tower Diaphragm Flange Sub-Assembly NSD1-SA196 A/B weld joint 6A and

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

WSD1-SA226 weld joint 7B respectively. The QA Inspector randomly observed ZPMC CWI Lvliqing monitoring weld parameters.

Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Joshua Ishibashi, (858) 232-7081, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo, Joselito	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
